Dell Networking W-IAP105 Access Point

The Dell Networking W-IAP105 is an 802.11n-based instant access point (IAP) that delivers the affordability and simplicity of an entry-level enterprise-grade WiFi network.

The W-IAP105 has dual radio, each radio capable of working in either 2.4 or 5GHz bands, (dual radio, dual band) and includes built-in internal omni-directional antennas. The W-IAP105 delivers 300Mbps per radio, is built to provide years of trouble-free operation and is backed by an Extended Lifetime Warranty.

Virtual controller technology

The virtual controller technology in the Dell Networking W-IAP105 delivers enterprise-grade controller capabilities without requiring a separate access point controller. The virtual controller in a single IAP is capable of controlling a multiple number of other IAPs in a network that are either local or dispersed across multiple locations. Like a dedicated controller, an IAP is able to perform key tasks such as AP auto discovery, 802.1X authentication, role- and device-based policy enforcement, rogue detection as well as specialized Adaptive Radio Management™ (ARM) that optimizes WiFi client behavior by making sure that IAPs stay clear of RF interference. When multiple IAPs are connected, a single IAP acts as a primary virtual controller. In the event of primary virtual controller failure, another W-Series IAP in a chain automatically takes on the role with no disruption to services. Scalability of an IAP network is bounded by Layer 2 network design best practices.

Ease of deployment

Dell Networking W-IAPs are designed to be up and running in minutes. From a laptop, simply connect wirelessly to an SSID to perform over-the-air provisioning in quick, easy steps. To expand the network, just install more Dell Networking W-IAPs — configuration is automatically uploaded to new units. You can dedicate one radio in dual-radio W-IAPs to form a wireless mesh type of network and eliminate cabling between W-IAPs.

Management and visibility

Multiple Dell Networking W-IAP networks can be securely and centrally managed by the Dell Networking W-Series AirWave software management suite, allowing W-IAPs to operate hundreds of remote locations. With Dell Networking W-Series AirWave, IT has real-time visibility into users, mobile devices, and wired and wireless LANs infrastructure, all from a single management console.

Dell also offers OpenManage Network Manager (OMNM) network management software with a highly customizable, easy-to-use, web-based console. OMNM delivers support for the full line of Dell Networking wired devices and W-Series wireless devices and offers enhanced features for traffic flow analysis, deployment, monitoring and management. OMNM comes with 10 free licenses; each IAP-based network uses one license, you can use the remaining nine licenses for your other Dell Networking devices.

Investment protection

As WLAN requirements expand, Dell Networking W-IAPs can be re-imaged as 802.11n campus APs and migrate to a centralized Mobility Controller architecture capable of supporting hundreds and thousands of APs. Firmware to covert an IAP to a campus AP is available upon request. In addition to providing WLAN access, campus APs in a centralized, controller architecture can provide wireless intrusion protection and powerful spectrum analysis capabilities.

TAA-compliant

The W-IAP105 TAA version is compliant with the guidelines put forth in the Trade Agreements Act (19 U.S.C. and 2501-2581), which is intended to promote products either made in the USA or free-trade-friendly countries.

Mainstream 600Mbps 802.11n access point with built-in virtual controller, offering simplicity, manageability and access point clustering capability.

Specifications

Operating modes

- Multiservice concurrent 802.11a/n + b/g/n WLAN
- Backward compatible with 802.11a/b/g and mixed-mode 11a/b/g/n deployments

Radios

- Multifunction, dual radio capable of 2.4 and 5GHz operation
- Both 802.11n radios implement 2x2 MIMO with two spatial streams, providing up to 300Mbps data rate per radio

Wireless radio specifications

- Supported frequency bands (country-specific restrictions apply):
  - 2.400 to 2.4835GHz
  - 5.150 to 5.250GHz
  - 5.250 to 5.350GHz
  - 5.470 to 5.725GHz
  - 5.725 to 5.875GHz
- Available channels: Dependent upon configured regulatory domain
- Dynamic frequency selection optimizes the use of available RF spectrum
- Transmit power:
  - 2.4GHz: Up to 23dBm (limited by local regulatory requirements)
  - 5GHz: Up to 23dBm (limited by local regulatory requirements)
  - Transmit power configurable in increments of 0.5dBm
- Supported radio technologies:
  - 802.11b: Direct-sequence spread-spectrum (DSSS)
  - 802.11a/g/n: Orthogonal frequency division multiplexing (OFDM)
  - 802.11n: 2x2 MIMO with two spatial streams
- Supported modulation types:
  - 802.11b: BPSK, QPSK, CCK
  - 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM

  Association rates (Mbps):
  - 802.11b: 1, 2, 5.5, 11
  - 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54
  - 802.11n: MCS0 - MCS15 (6.5 to 300Mbps)
  - 802.11n high-throughput (HT) support: HT 20/40
  - 802.11n packet aggregation: A-MPDU, A-MSDU

RF management

- Automatic transmit power and channel management control with auto coverage hole correction via ARM
- Maximum ratio combining for improved receiver performance

Advanced features

- Wireless intrusion detection
- Integrated Trusted Platform Module for secure storage of credentials and keys

Antennas

- Four integrated, downtilt omni-directional antennas
- Maximum antenna gain:
  - 2.4GHz/3.0dBi
  - 5GHz /4.5dBi

Interfaces

- Network:
  - 1 x 10/100/1000Base-T Ethernet (RJ45), auto-sensing, MDI/MDX
- Power:
  - 1 x DC power connector
- Other:
  - 1 x RJ45 console interface

Power options

- 48V DC 802.3af PoE
- External AC power providing 12V DC to AP (adapter sold separately)
- Maximum power consumption: 12.5 watts

Mounting

- Ceiling tile rail (15/16" AND 9/16" recessed or non-recessed)
- Wall mount

Mechanical

- 132 x 135 x 45 mm (5.2 x 5.3 x 1.8 in)
- Weight: 300g (10.58oz)

Certifications/Regulatory

- Wi-Fi certified: 802.11a/b/g/n

  Product meets EMC, safety and wireless standards of over 50 countries inclusive of; USA (FCC), Canada, EU, Japan, Korea, China. For more country-specific regulatory information, and approvals, please see your Dell representative.

Minimum AOS version

- 5.0.3.0-1.1.0.0

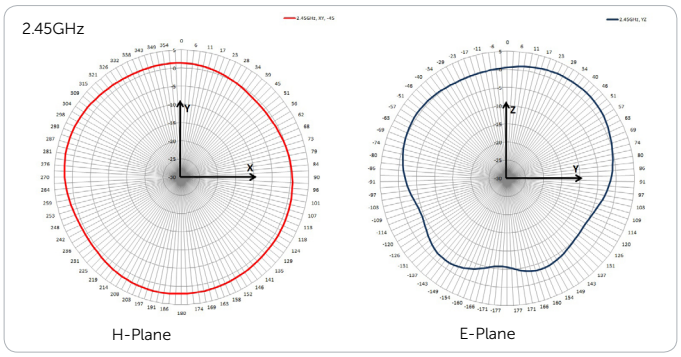
Extended Life Warranty*

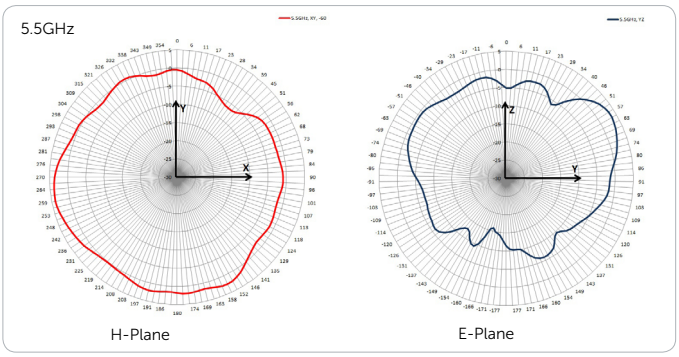
*Select Networking products carry an Extended Life Warranty with Basic Hardware Service. Warranty covers repair or replacement of the product for as long as it remains in use by the customer. In the event of discontinuance of product manufacture, Dell Extended Life Warranty extends until five (5) years after end of product model sales. Warranty limits any power supply, antennae or accessories to one (1) year from date of purchase. Warranty does not include troubleshooting, configuration, or other advanced service provided by Dell ProSupport. The Extended Life Limited Hardware Warranty is not transferrable. For more information, see dell.com/warranty.

W-IAP105 RF performance table				
	Max TX power per active TX chain (dBm)	RX sensitivity (dBm)	Max TX power per active TX chain (dBm)	RX sensitivity (dBm)
	2.4GHz		5GHz	
802.11b				
1Mbps	20	-96	-	-
2Mbps	20	-96	-	-
5.5Mbps	20	-94	-	-
11Mbps	20	-93	-	-
802.11a/g				
6Mbps	20	-96	20	-96
9Mbps	20	-96	20	-96
12Mbps	20	-96	20	-96
18Mbps	20	-95	20	-95
24Mbps	20	-92	20	-91
36Mbps	19	-89	19	-88
48Mbps	18	-85	18	-84
54Mbps	17	-83	17	-83
802.11n HT20				
MCS0	20	-96	20	-96
MCS1	20	-95	20	-94
MCS2	20	-93	20	-92
MCS3	20	-90	20	-89
MCS4	19	-87	19	-86
MCS5	18	-82	18	-82
MCS6	17	-81	17	-80
MCS7	15	-80	15	-79
MCS8	20	-95	20	-95
MCS9	20	-93	20	-92
MCS10	20	-91	20	-90
MCS11	20	-87	20	-87
MCS12	19	-84	19	-84
MCS13	18	-81	18	-80
MCS14	17	-80	17	-78
MCS15	15	-77	15	-77
802.11n HT40				
MCS0	20	-93	20	-92
MCS1	20	-93	20	-92
MCS2	20	-90	20	-89
MCS3	20	-86	20	-86
MCS4	19	-83	19	-83
MCS5	18	-79	18	-80
MCS6	17	-77	17	-77
MCS7	15	-76	15	-76
MCS8	20	-92	20	-92
MCS9	20	-89	20	-90
MCS10	20	-87	20	-87
MCS11	20	-84	20	-84
MCS12	19	-82	19	-81
MCS13	18	-76	18	-77
MCS14	17	-76	17	-75
MCS15	15	-73	15	-73

Maximum capability of the hardware provided. Maximum transmit power will be limited by local regulatory settings.

W-IAP105 antenna plots





Ordering information

Part number	Description
W-IAP105	Dell Networking W-IAP105 AP (802.11a/n and 802.11b/g/n) – Integrated Antennas
W-IAP-105-USF1	Dell Networking W-IAP105 AP (802.11a/n and 802.11b/g/n) – Integrated Antennas - FIPS/TAA - Restricted Regulatory Domain - United States
W-IAP-105-F1	Dell Networking W-IAP105 AP (802.11a/n and 802.11b/g/n) – Integrated Antennas - FIPS/TAA - Unrestricted Regulatory Domain - MUST NOT be used for deployments in the United States, Japan or Israel
W-AP-AC-UN	12V DC Universal AC Power Adapter Kit - North America, Japan, United Kingdom, Italy, EC (Schuko), Australia, China, India, Korea
W-AP-DC-CAR	12V DC Car Power Adapter Kit
W-AP105-MNT	W-AP105 Access Point Mounting Kit for flat surfaces or wall boxes (note: covers DC power interface)
W-AP105-MNT-C	W-AP105 Access Point Ceiling Mounting Kit (rail adapters)
W-AP105-MNT-DC	W-AP105 Access Point Mounting Kit for flat surfaces or wall boxes (leaves DC power interface exposed)

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